IN THE SPECIFICATION

Please enter the following amendments to the specification:

Replace paragraph No. **[0077]** with the following paragraph:

Fig. 5C shows the relationship between fringe intensity and sensor deflection. The interference patterns may be detected using an optical detector such as a CCD camera 540. Different optical detection schemes may be used; for example, a CMOS array detector may be used. The output of CCD camera 540 may be analyzed using a CPU 542 for image processing.

Replace paragraph No. **[00120]** with the following paragraph:

Multiplexed detection of changes in multiple sensors can provide benefits not found in previous efforts, which generally included a single cantilever, probed for a single molecule per trial, and lasted for times on the order of an hour. In contrast, a multiplexed system such as described here may allow for detection of many different biomolecular interactions at the same time. Since there are many thousands of biomolecular interactions possible in a living cell, the benefits of multiplexed detection may be significant. In order to perform multiplexed detection, the present systems and techniques may include common mode rejection, microfabrication of sensor arrays, and optical techniques to detect changes in multiple sensors. The present systems and techniques may allow detection of deflections of multiple cantilevers with nanometer scale resolution.

(b) Nomenclature:

D_i	domain on CCD image where spot of i^{th} cantilever lies
Ej	modulus of elasticity of j^{th} layer of cantilever [Pa]
N	total number of cantilevers under consideration
R	path length from cantilever to imaging screen [m]
T	temperature [K]
X	distance along cantilever from base [m]
Z	cantilever deflection [m]
s	displacement of a spot on imaging screen [m]

t_j thickness of j^{th} layer of cantilever [m]

x_i coordinate on CCD image of i^{th} cantilever [pixel #]

y_i coordinate on CCD image of i^{th} cantilever [pixel #]

α_j thermal expansion modulus of j^{th} cantilever layer [K^{-1}]

γ surface stress [J/m^2]

κ curvature [m^{-1}]

θ angle of deflection of cantilever [rad]

σ residual stress in a thin film [N/m^2]

ν Poisson ratio

(c) Mechanics of Stress-Induced Deflection:

Replace paragraph No. **[00127]** with the following paragraph:

The details of a method of fabrication are shown in Figs. 3A to 3F for a single cantilever, where the paddle has been omitted for clarity. In this example, all devices were fabricated at the UC Berkeley Microlab. To form a cantilever array, high and low stress nitride layers are grown in sequence in an LPCVD furnace on a single polished silicon <100> wafer. Large openings are patterned in the backside to act as a mask for a subsequent etch, and then the cantilevers are patterned on the frontside. Next a wet KOH or TMAH etch through the wafer is performed to release the cantilevers. Because of the stressy nitride underlayer, at this stage the released cantilevers are bent downwards by many tens of microns. The last step is the evaporation of chrome and gold, using a physical mask for coarse patterning. In principle the metals could be patterned far more precisely by evaporating and patterning prior to the cantilever release; however there is some concern that the delicate metal films may not withstand the extended wet etch.

IN THE DRAWINGS

Replace the drawing with the attached 20 sheets of formal drawing.